

**REMARKS**

Claims 1-8 are pending in this application and were rejected in Paper No. 3. The Examiner is respectfully requested to reconsider and withdraw the outstanding rejections in view of the remarks contained herein.

**REJECTIONS UNDER 35 U.S.C. §§ 102 and 103**

Claims 1-3 and 5-7 were rejected under 35 U.S.C. § 102(b) as allegedly anticipated by Kramer et al. (U.S. Patent No. 5,277,435).

Claims 1-8 were rejected under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Kramer.

Applicant respectfully submits that these rejections are traversed without the need for substantive change to the original claims. Original claim 1 recites Applicant's method of detachably mounting a rotating tool that highlights the following features: (1) making the inner diameter at normal temperatures of the attachment portion smaller than the outer diameter at normal temperatures of the mounting portion and (2) heating the attachment portion and/or cooling the mounting portion to make the inner diameter of the attachment portion larger than the outer diameter of the mounting portion so as to fit the attachment onto the mounting portion. Kramer fails to teach or suggest these features.

In addition, original claim 5 recites the following features: (1) making the outer diameter at normal temperatures of the attachment portion larger than the inner diameter at normal temperatures of the mounting portion and (2) cooling the attachment portion and/or heating the mounting portion to make the outer diameter of the attachment portion smaller than the inner diameter of the mounting portion so as to fit the attachment portion into the mounting portion.

Kramer also fails to teach or suggest these features. Therefore, Applicant respectfully submits that the present invention is not anticipated because Kramer fails to inherently or explicitly disclose the method of independent claims 1 and 5.

As to the differences between the claim features discussed above and Kramer, reference is made to Figure 1 of Kramer. According to Applicant, Kramer discloses, to those of ordinary skill in the art, a shrink collar (18) of shape-memory alloy that is used to shrink the clamping sleeve (15) so that the clamping sleeve (15) clamps the cylindrical tool shank (12). The outer diameter of the cylindrical tool shank (12) is smaller than the inner diameter of the clamping sleeve (15) before the shrink collar (18) is pushed onto the clamping sleeve (15) (see Fig. 1 of Kramer).

With reference to Figure 4 of Kramer, in Applicant's view, the displacement plug (25) of shape-memory alloy is used to displace the clamping sleeve (15') so that the central bore (26') of the disc-like tool (2') is connected with the clamping sleeve (15'). The inner diameter of the central bore (26') is larger than the outer diameter of the clamping sleeve (15') before the displacement plug (25) is displaced inside the clamping sleeve (15') (see Fig. 4 of Kramer). Therefore, the method of Kramer lacks the highlighted features of independent claims 1 and 5 in the present invention. As such, Applicant respectfully submits that independent claims 1 and 5 and their respective dependent claims are not anticipated by Kramer under 35 U.S.C. §102 and rather are in condition for allowance thereover.

Applicant respectfully further submits that claims 1 and 5 are not made obvious by APA in view Kramer. For the reasons immediately above, Kramer is submitted as failing to anticipate (or render obvious) claims 1 and 5. Also, as pointed out by the Examiner, the APA does not teach or suggest mounting the tool to the mounting portion of the spindle by either heating or

cooling the mounting portion, or heating or cooling the tool. Therefore, neither Kramer nor APA remedies the above described deficiencies of APA with respect to claims 1 or 5. Thus, independent claims 1 and 5 as well as dependent claims 2-4 and 6-8 are patentably distinguishable over the asserted combination of APA with Kramer.

Applicant respectfully submits that the present invention as set forth in claims 1 and 5 is not made obvious by Kramer singly, or in any combination with APA. Moreover, it is respectfully submitted that there is nothing in the cited documents that would have motivated those of ordinary skill in the art to have combined the teachings of the cited art in any way that would render the claimed invention obvious. Applicant respectfully urges that the asserted rejections over Kramer alone, and the alleged combination of Kramer and APA are overcome, and withdrawal of the rejections under both 35 U.S.C. § 102 and 35 U.S.C. § 103 is requested.

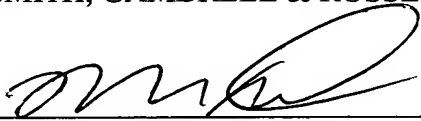
**CONCLUSION**

Applicant respectfully submits that this Amendment and the above remarks obviate the outstanding rejections in this case, thereby placing the application in condition for immediate allowance. Allowance of this application is earnestly solicited.

If any fees under 37 C. F. R. §§ 1.16 or 1.17 are due in connection with this filing, please charge the fees to Deposit Account No. 02-4300, Order No. 033773M033.

Respectfully submitted,  
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**Listing of Claims**

1. (original) A method of detachably mounting a rotating tool provided with an attachment portion having a cylindrical inner circumferential surface to a mounting portion having a cylindrical outer circumferential surface of a spindle, comprising the steps of:

making the inner diameter at normal temperatures of the attachment portion smaller than the outer diameter at normal temperatures of the mounting portion; and

heating the attachment portion and/or cooling the mounting portion to make the inner diameter of the attachment portion larger than the outer diameter of the mounting portion so as to fit the attachment portion onto the mounting portion.

2. (original) The method of claim 1, wherein at least the mounting portion of the spindle is made of metal.

3. (original) The method of claim 1, wherein at least the attachment portion of the rotating tool is made of metal.

4. (original) The method of claim 1, wherein the rotating tool comprises a metal hub and a thin annular cutting blade secured to the hub, the hub being provided with the attachment portion and the cutting blade containing diamond grains.

5. (original) A method of detachably mounting a rotating tool provided with an attachment portion having a cylindrical outer circumferential surface to a mounting portion having a cylindrical inner circumferential surface of a spindle, comprising the steps of:

making the outer diameter at normal temperatures of the attachment portion larger than the inner diameter at normal temperatures of the mounting portion; and

cooling the attachment portion and/or heating the mounting portion to make the outer diameter of the attachment portion smaller than the inner diameter of the mounting portion so as to fit the attachment portion into the mounting portion.

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6. (original) The method of claim 5, wherein at least the mounting portion of the spindle is made of metal.

7. (original) The method of claim 5, wherein at least the attachment portion of the rotating tool is made of metal.

8. (original) The method of claim 5, wherein the rotating tool comprises a metal hub and a thin annular cutting blade secured to the hub, the hub being provided with the attachment portion and the cutting blade containing diamond grains.